



## HEALTH POLICY

# The Use of Spanish Language Skills by Physicians and Nurses: Policy Implications for Teaching and Testing

Lisa C. Diamond, MD, MPH<sup>1</sup>, Delphine S. Tuot, MD, CM<sup>2,3</sup>, and Leah S. Karliner, MD, MAS<sup>3,4</sup>

<sup>1</sup>Memorial Sloan-Kettering Cancer Center, Center for Immigrant Health and Cancer Disparities, Department of Psychiatry and Behavioral Health, New York, NY, USA; <sup>2</sup>Division of Nephrology, University of California San Francisco, San Francisco, CA, USA; <sup>3</sup>Department of Medicine, University of California San Francisco, San Francisco, CA, USA; <sup>4</sup>Medical Effectiveness Research Center for Diverse Populations, Division of General Internal Medicine, University of California, San Francisco, San Francisco, CA, USA.

**BACKGROUND:** Language barriers present a substantial communication challenge in the hospital setting.

**OBJECTIVE:** To describe how clinicians with various levels of Spanish language proficiency work with interpreters or their own Spanish skills in common clinical scenarios.

**DESIGN & PARTICIPANTS:** Survey of physicians and nurses who report ever speaking Spanish with patients on a general medicine hospital floor.

**MEASUREMENTS:** Spanish proficiency rated on a 5-point scale, self-reported use of specific strategies (own Spanish skills, professional or ad-hoc interpreters) to overcome the language barrier.

**RESULTS:** Sixty-eight physicians and 65 nurses participated. Physicians with low-level Spanish proficiency reported frequent use of ad-hoc interpreters for all information-based scenarios, except pre-rounding in the morning when most reported using their own Spanish skills. For difficult conversations and procedural consent, most used professional interpreters. Comparatively, physicians with medium proficiency reported higher rates of using their own Spanish skills for information-based scenarios, lower rates of professional interpreter use, and little use of ad-hoc interpreters. They rarely used their own Spanish skills or ad-hoc interpreters for difficult conversations. Physicians with high-level Spanish proficiency almost uniformly reported using their own Spanish skills. The majority (82%) of nurses had low-level Spanish proficiency, and frequently worked with professional interpreters for educating patients, but more often used ad hoc interpreters and their own Spanish skills for information-based scenarios, including medication administration.

**CONCLUSIONS:** Physicians and nurses with limited Spanish proficiency use these skills, even in important clinical circumstances in the hospital. Health-care organizations should evaluate clinicians' non-English language proficiency and set policies about use of language skills in clinical care.

**KEY WORDS:** physician-patient communication; interpreter; language barriers; nurses; inpatients.

J Gen Intern Med 27(1):117-23

DOI: 10.1007/s11606-011-1779-5

© Society of General Internal Medicine 2011

Received January 30, 2011

Revised May 26, 2011

Accepted June 13, 2011

Published online July 20, 2011

## BACKGROUND

According to the 2007 American Community Survey from the US Census, of the 34.5 million people who spoke Spanish at home, 47% had limited English proficiency (LEP),<sup>1</sup> defined as the limited ability to speak, read, write, or understand English. Lower quality of health care and worse health outcomes are more likely when language barriers exist between patients and providers, independent of socioeconomic and insurance status.<sup>2-7</sup> These disparities are likely to be exacerbated in the inpatient setting, given the frequent, brief nature of communication between patients and clinicians (physicians and nurses). Language barriers can prevent clinicians from obtaining an adequate history, and may lead to longer hospital stays and higher readmission rates.<sup>8,9</sup> Language barriers also affect a clinician's capacity to engage patients in joint decision making, and limit a patient's ability to fully express thoughts, understand instructions, and engage in self management.<sup>10-12</sup> However, the effects of language barriers can be mitigated by working with professional interpreters.<sup>13-15</sup>

Despite evidence of the benefits of working with professional interpreters, studies suggest that they are underused by clinicians.<sup>16-20</sup> Ease of access to professional interpreters, experience using professional interpreters, and the importance placed by clinicians on direct communication with patients all likely play a role in determining whether a clinician uses a professional interpreter.<sup>17,18,20-22</sup>

Research has shown that fluent, bilingual clinicians' direct communication with LEP patients can result in improved health-care quality and outcomes, including better patient satisfaction with care,<sup>23,24</sup> medication adherence,<sup>25</sup> patient understanding of diagnoses and treatment,<sup>16</sup> outcomes for LEP patients with diabetes,<sup>4,26</sup> patient centeredness,<sup>27</sup> and more health education.<sup>24,28</sup> Having a language-concordant provider leads to fewer emergency department visits, lower likelihood of missing medications, and lower cost of care.<sup>25,29,30</sup> Although full language concordance between LEP patients and clinicians is beneficial, the effects of partial language concordance are unknown. Even for partially fluent clinicians, providing language concordant care may be appropriate and even desirable in some settings and circumstances.<sup>27,30,31</sup> Nevertheless, there are obvious concerns that inadequate communication may lead to lower quality of care and threaten safety during interactions that rely on partial language concordance. To date, there is no research to guide standards for use of less-than-fluent non-English language skills with LEP patients.

Accordingly, we sought to describe how and when physicians and nurses with various levels of Spanish language proficiency use professional or ad-hoc interpreters or their own Spanish

skills in common clinical scenarios in the acute care hospital setting.

## METHODS

The study focused on the 66-bed General Medicine floor of the University of California San Francisco (UCSF) Moffitt-Long Hospital, a 400-bed urban academic medical center with an ethnically and linguistically diverse catchment area. According to the medical center's administration, approximately 18% of patients on the General Medicine floor are LEP, with Spanish, Chinese, and Russian being the most common non-English languages. Health-care providers on the floor include staff nurses, Internal Medicine attending physicians, and the resident physicians they supervise.

As part of a quality improvement project with the UCSF Medical Center Interpreting Services Department, we implemented an easy-access professional interpreting program by placing dual-handset telephones at every patient's bedside on the General Medicine floor in July 2008. We surveyed physicians and nurses working on the General medicine floor about their communication with all LEP patients both before and after implementation of the bedside dual-handset phones. Details of the intervention, recruitment and survey development, and overall results are described elsewhere.<sup>32</sup> This analysis did not rely on the quality improvement intervention, but was conducted to describe how clinicians used their Spanish skills in a hospital setting with available professional interpreting services, and thus included the 68 (86%) physicians and 65 (79%) nurses surveyed who reported ever speaking Spanish directly with patients.

Based on previous instruments used by the investigators,<sup>21,33</sup> we asked physicians and nurses who reported ever speaking Spanish directly with patients to rate their own Spanish language proficiency on a 5-point scale. The scale was: (1) a little (rudimentary conversation skills), (2) fair (can converse casually), (3) well (can usually interview a patient), (4) very well (can always interview a patient), and (5) excellent (fluent like a native speaker). For the purposes of this analysis, we collapsed codes 1 and 2 to indicate low Spanish proficiency, code 3 indicates medium Spanish proficiency, and codes 4 and 5 were combined to indicate high Spanish proficiency.

The survey also asked about use of strategies to overcome the language barrier during common clinical interactions with Spanish-speaking patients. We asked physician participants about the following types of clinical scenarios: *presenting information to patients* (discharge instructions, consent for procedures, and updating the patient on his/her clinical condition), *obtaining information from patients* (obtaining a medical history and morning pre-rounds), and *difficult conversations* (end of life discussions, providing bad news, and conducting a family meeting). We asked nurse participants about the following types of clinical scenarios: *presenting information to patients* (discharge instructions, explaining plan of care, and administering medication), *obtaining information from patients* (conducting an admission assessment, conducting ongoing patient assessments, and symptom management), and *educating patients* (discussing disease process, explaining tests and procedures, and patient education).

For each of the clinical scenarios asked of physicians and nurses, we analyzed which mode of communication was used. Respondents chose from the following categories: professional interpreters (telephonic or in-person), ad-hoc interpreters, and use of clinician's own Spanish skills without an interpreter. We compared responses among the physicians and nurses separately. According to the National Council on Interpreting in Healthcare, a professional interpreter can be defined as someone "with appropriate training and experience who is able to interpret with consistency and accuracy and who adheres to a code of professional ethics" and an ad-hoc interpreter as "an untrained person who is called upon to interpret," which for the purposes of this study included bilingual family or friends of patients, nurses, or clerks.<sup>34</sup>

We used descriptive statistics to characterize provider demographic characteristics, including sex, age, years of experience, shift worked (for nurses), attending or resident (for physicians), race/ethnicity, US born, fluency in a non-English language as a child, and self-reported proficiency in Spanish (3-level variable).

Since there was limited overlap of respondents in the pre- and post-survey groups (25% for physicians and 30% for nurses) and no differences observed between the pre- and post-intervention groups of nurses and minimal differences observed for physicians, further analyses were conducted on the whole sample, consisting of the first survey completed by each participant. Thus, if a physician or nurse completed both the pre- and post-surveys, only the pre-survey was included.

We performed  $\chi^2$  or Fisher's exact tests, where appropriate, for categorical variables, and t-tests for continuous variables to characterize the association between clinician Spanish proficiency and strategy used to overcome the language barrier in common clinical scenarios. Data were analyzed using STATA statistical software (STATACorp, Version 11, College Station, TX).

## RESULTS

Sixty-eight physicians and 65 nurses participated in the study. Tables 1 (physicians) and 2 (nurses) show baseline characteristics of participants overall and by Spanish proficiency level. Among physicians, there were no significant differences across Spanish proficiency level for sex, attending status, age, or years of experience. The largest proportion of physicians

**Table 1. Baseline Physician Characteristics: Overall and by Spanish Proficiency Level (by person n=68)\***

Characteristic	Overall (n=68)	Low (n=34)	Medium (n=18)	High (n=16)
Female	33 (48.5)	17 (50)	7 (38.9)	9 (56.3)
Attending	40 (58.8)	21 (61.8)	9 (50)	10 (62.5)
Age	34.8 (7.9)	34.4 (6.9)	34.8 (9.4)	35.8 (8.5)
Years of experience	7.5 (7.9)	7.4 (7.2)	7.1 (9.0)	8.3 (8.6)
Race/ethnicity				
• Asian	18 (26.5)	11 (32.3)	5 (27.8)	2 (12.5)
• Latino	7 (10.3)	0 (0)	2 (11.1)	5 (31.3)
• Multiethnic	6 (8.8)	1 (2.9)	1 (5.6)	4 (25.0)
• White	37 (54.4)	22 (64.7)	10 (55.6)	5 (31.3)
Spoke a non-English Language as a child at home	21 (30.9)	8 (23.5)	3 (16.7)	10 (62.5)
Born in the US	57 (83.8)	30 (88.2)	15 (83.3)	12 (75)

**Table 2. Baseline Nurse Characteristics: Overall and by Spanish Proficiency Level (by person n=65)\***

Characteristic	Overall (n=65)	Low (n=53)	Medium (n=6)	High (n=6)
Female	55 (84.6)	45 (84.9)	5 (83.3)	5 (83.3)
Shift worked				
• Day	13 (20)	11 (20.8)	1 (16.7)	1 (16.7)
• Night	8 (12.3)	5 (9.4)	1 (16.7)	2 (33.3)
• Rotate	44 (67.7)	37 (69.8)	4 (66.7)	3 (50)
Age	31.1 (7.7)	32 (8.1)	26 (3.5)	29 (2.9)
Years of experience	5.9 (6.3)	5.9 (6.5)	4.3 (3.2)	6.8 (6.5)
Race/ethnicity				
• Asian	11 (16.9)	10 (18.9)	1 (16.7)	0 (0)
• Black	3 (4.6)	3 (5.7)	0 (0)	0 (0)
• Latino	7 (10.8)	3 (5.7)	1 (16.7)	3 (50)
• Pacific Islander	3 (4.6)	3 (5.7)	0 (0)	0 (0)
• Multiethnic	4 (6.2)	3 (5.7)	1 (16.7)	0 (0)
• White	37 (56.9)	31 (58.5)	3 (50)	3 (50)
Spoke a non-English language as a child at Home	16 (24.6)	10 (18.9)	3 (50)	3 (50)
Born in the US	52 (80)	40 (75.5)	6 (100)	6 (100)

\*Values are n (%) for categorical variables and mean (SD) for continuous. *P* values are for  $\chi^2$ /Fisher's exact tests for categorical variables and *t*-tests for continuous variables.

reporting high Spanish proficiency were Latino and multiethnic, and the majority in the high proficiency group spoke a non-English language at home growing up. Among nurses, there were no significant differences in any of the characteristics by Spanish proficiency level.

There were no differences in the use of the three strategies to overcome language barriers (professional interpreter, ad-hoc interpreter, and use of own Spanish skills) observed among physicians or nurses by sex, shift worked (for nurses), attending or resident (for physicians), or years of experience. There were some differences according to language spoken at home as a child. Physicians who reported speaking a non-English language as a child were more likely to report using their own Spanish skills (rather than a professional or ad-hoc interpreter) for difficult conversations and when obtaining consent for procedures. Their nurse counterparts were more likely to report using professional interpreters when administering medication (Table 2).

Table 3 shows the relationship between physician Spanish proficiency level and strategies used to overcome language barriers for each clinical scenario. Some consistency in the strategies used by physicians with low Spanish proficiency was noted. They reported frequent use of ad-hoc interpreters (46–50%) for all information-based scenarios, except for pre-rounding in the morning, for which 62% reported using their own limited Spanish skills, whereas most worked with professional interpreters for difficult conversations and procedural consent.

Compared to physicians with low proficiency, those with medium Spanish proficiency reported higher rates of using their own Spanish skills (38–94%) for presenting information to and obtaining information from patients (other than obtaining procedural consent, for which 88% reported working with professional interpreters and 13% reported use of their own Spanish), somewhat lower rates of professional interpreter use (33–39%), and little use of ad-hoc interpreters, except for communicating discharge instructions (25%). They rarely used their own Spanish skills or ad-hoc interpreters for difficult conversations.

Physicians with high Spanish proficiency almost uniformly reported using their own Spanish skills when presenting information to and obtaining information from patients (92–100%). While most also used their own Spanish skills for difficult conversations, a substantial minority worked with professional interpreters (27–33%).

Table 4 shows the relationship between nurse Spanish proficiency level and strategies used to overcome language barriers for each clinical scenario. Compared with physicians, nurses with low Spanish proficiency demonstrated greater variability when bridging the language barrier for all clinical scenarios. This group encompassed most of the nurse participants, and their use of interpreters was inconsistent. The majority worked with some kind of interpreter, although frequently an ad-hoc, for: giving discharge instructions (28%), explaining the plan of care (31%), discussing the disease process (19%), and explaining tests and procedures (20%). For other common clinical interactions, they were more evenly split in the use of all strategies, including their own limited Spanish skills for: administering medication (31%), managing patients' symp-

**Table 3. Relationship of Spanish Proficiency and Strategies to Overcome Language Barriers: Physicians (n=68)\***

	Spanish language proficiency			p
	Low (n=34)	Medium (n=18)	High (n=16)	
<b>Presenting information to patients</b>				
<b>Discharge instructions</b>				<0.001
Professional interpreter	16 (51.6)	6 (37.5)	0 (0)	
Ad-hoc interpreter	15 (48.4)	4 (25.0)	1 (6.25)	
Use own Spanish	0 (0)	6 (37.5)	15 (93.8)	
<b>Consent for procedures</b>				<0.001
Professional interpreter	19 (79.2)	14 (87.5)	1 (7.7)	
Ad-hoc interpreter	4 (16.7)	0 (0)	0 (0)	
Use own Spanish	1 (4.2)	2 (12.5)	12 (92.3)	
<b>Updating patient on clinical condition</b>				<0.001
Professional interpreter	13 (39.4)	6 (33.3)	0 (0)	
Ad-hoc interpreter	15 (45.5)	2 (11.1)	0 (0)	
Use own Spanish	5 (15.2)	10 (55.6)	16 (100)	
<b>Obtaining information from patients</b>				
<b>Obtaining medical history</b>				<0.001
Professional interpreter	14 (43.8)	7 (38.9)	0 (0)	
Ad-hoc interpreter	16 (50)	2 (11.1)	0 (0)	
Use own Spanish	2 (6.3)	9 (50.0)	15 (100)	
<b>Morning prerounds</b>				0.02
Professional interpreter	3 (10.3)	0 (0)	0 (0)	
Ad-hoc interpreter	8 (27.6)	1 (6.3)	0 (0)	
Use own Spanish	18 (62.1)	15 (93.8)	14 (100)	
<b>Difficult conversations</b>				
<b>End of life discussion</b>				<0.001
Professional interpreter	28 (90.3)	17 (94.4)	5 (33.3)	
Ad-hoc interpreter	3 (9.7)	0 (0)	0 (0)	
Use own Spanish	0 (0)	1 (5.6)	10 (66.7)	
<b>Providing bad news</b>				<0.001
Professional interpreter	30 (93.8)	15 (83.3)	4 (28.6)	
Ad-hoc interpreter	2 (6.3)	1 (5.6)	0 (0)	
Use own Spanish	0 (0)	2 (11.1)	10 (71.4)	
<b>Conducting family meeting</b>				<0.001
Professional interpreter	28 (87.5)	15 (83.3)	4 (26.7)	
Ad-hoc interpreter	4 (12.5)	3 (16.7)	2 (13.3)	
Use own Spanish	0 (0)	0 (0)	9 (60.0)	

\*Values are n (%) for categorical variables and mean (SD) for continuous. Due to missing data in individual questions, the sum in each clinical interaction category may not add up to n=68.



**Table 4. Relationship of Spanish Proficiency and Strategies to Overcome Language Barriers: Nurses (n=65)\***

	Spanish Language Proficiency			
	Low (n=53)	Medium (n=6)	High (n=6)	p
<b>Presenting information to patients</b>				
<b>Discharge instructions</b>				<0.001
Professional interpreter	32 (68.1)	3 (50.0)	0 (0)	
Ad-hoc interpreter	13 (27.7)	1 (16.7)	0 (0)	
Use own Spanish	2 (4.3)	2 (33.3)	4 (100)	
<b>Explaining plan of care</b>				0.003
Professional interpreter	28 (58.3)	3 (50)	0 (0)	
Ad-hoc interpreter	15 (31.3)	0 (0)	1 (25)	
Use own Spanish	5 (10.4)	3 (50)	3 (75)	
<b>Administering medication</b>				0.06
Professional interpreter	21 (43.8)	3 (50)	0 (0)	
Ad-hoc interpreter	12 (25.0)	0 (0)	0 (0)	
Use own Spanish	15 (31.3)	3 (50)	4 (100)	
<b>Obtaining information from patients</b>				
<b>Conducting admission assessment</b>				0.03
Professional interpreter	18 (38.3)	2 (33.3)	0 (0)	
Ad-hoc interpreter	22 (46.8)	1 (16.7)	1 (25)	
Use own Spanish	7 (14.9)	3 (50)	3 (75)	
<b>Conducting ongoing patient assessments</b>				0.03
Professional interpreter	9 (18.8)	2(33.3)	0 (0)	
Ad-hoc interpreter	22 (45.8)	0 (0)	0 (0)	
Use own Spanish	17 (35.4)	4 (66.7)	4 (100)	
<b>Symptom management</b>				0.07
Professional interpreter	15 (30.6)	2 (33.3)	0 (0)	
Ad-hoc interpreter	16 (32.7)	0 (0)	0 (0)	
Use own Spanish	18 (36.7)	4 (66.7)	4 (100)	
<b>Educating patients</b>				
<b>Discussing disease process</b>				<0.001
Professional interpreter	35 (81.4)	3 (50)	1 (20)	
Ad-hoc interpreter	8 (18.6)	0 (0)	0 (0)	
Use own Spanish	0 (0)	3 (50)	4 (80)	
<b>Explaining tests and procedures</b>				0.001
Professional interpreter	35 (76.1)	3 (50)	1 (20)	
Ad-hoc interpreter	9 (19.6)	0 (0)	1 (20)	
Use own Spanish	2 (4.4)	3 (50)	3 (60)	
<b>Patient education</b>				<0.001
Professional interpreter	32 (65.3)	3 (50)	0 (0)	
Ad-hoc interpreter	15 (30.6)	0 (0)	0 (0)	
Use own Spanish	2 (4.1)	3 (50)	4 (100)	

\*Values are n (%) for categorical variables and mean (SD) for continuous. Due to missing data in individual questions, the sum in each clinical interaction category may not add up to n=65.

toms (37%), and conducting ongoing patient assessments (35%).

Nurses with medium Spanish proficiency, like their physician counterparts, were largely split between using professional interpreters and using their own Spanish skills for all clinical scenarios.

As with the physician participants, nurses with high Spanish proficiency largely reported using their own Spanish skills, with occasional use of ad-hoc or professional interpreters, particularly for educating patients and explaining care plans.

## DISCUSSION

In this unique study, we characterize the strategies that physicians and nurses with varying levels of Spanish proficiency use in common clinical scenarios to overcome language barriers with Spanish-speaking LEP patients. Generally, phy-

sicians and nurses with low Spanish proficiency worked with interpreters; however, they were at least as likely to work with ad-hoc interpreters as professional interpreters. There was significant variability in the use of the strategies to overcome language barriers among physicians and nurses with medium proficiency, particularly among physicians engaged in mainly unidirectional communication (e.g., presenting information to patients or obtaining information from patients). Finally, clinicians with high proficiency primarily used their own Spanish skills.

The frequent use of ad-hoc interpreters by low proficiency physicians and nurses is inappropriate based on federal policies and existing research. Federal regulations require health-care organizations to assure the competency of language services offered by bilingual staff, including clinicians, although guidance is lacking on how this should be accomplished. Title VI of the Civil Rights Act states that people cannot be discriminated against as a result of their national origin, which has been interpreted by Federal guidance to include their primary language.<sup>35,36</sup> The Culturally and Linguistically Appropriate Services standards in Health Care, include four standards that reflect current Federal mandates under Title VI for the provision of language access services, including one that specifically condemns use of family or friends as interpreters and emphasizes that health-care organizations must assure the proficiency of language services offered by interpreters and bilingual staff.<sup>37</sup> Research has shown that untrained, ad-hoc interpreters, compared to professional interpreters, are more likely to commit communication errors. These errors can include omission of information from the clinician or patient, addition of words or phrases not used by the clinician or patient, substitution of words, editorializing by the interpreter on what s/he thinks the clinician or patient meant, and the use of incorrect words or phrases.<sup>13</sup>

The variability in the use of the strategies to overcome language barriers among clinicians with medium proficiency highlights the importance of conducting further research to inform policy about the appropriate use of non-English language skills by health-care providers. In our study, providers with medium proficiency were more likely to decide between working with a professional interpreter and using their own non-English language skills, with fewer using ad-hoc interpreters. For such clinicians, opting to use their own Spanish skills over a professional interpreter is likely related to interpreter availability, their perception of the patients' preferences, the clinical circumstances, and the degree of "language gap" between patient and clinician.<sup>38</sup> Future investigations should focus on characterizing clinician language proficiency, understanding how medium-proficiency physicians and nurses decide to use professional interpreters vs. their own language skills, and formulating guidance for clinicians about when, why, and how to effectively work with professional interpreters.

Our findings have important implications for policies regarding physician and nurse training. Given the abundance of Spanish-speaking US residents, many medical and nursing schools, residency programs, and health-care organizations offer courses in "Medical Spanish," in which clinicians are taught medical vocabulary in Spanish with the intent to improve communication between clinicians and patients with LEP. These courses may be taught by untrained instructors

without the ability to accurately assess participants' proficiency levels. Although some research has suggested that teaching Spanish language skills to clinicians improves their tested language abilities,<sup>39–42</sup> these programs can lead to unintended negative consequences, including the potential for impaired communication when non-fluent clinicians fail to recognize their limitations in Spanish.<sup>43</sup> Studies evaluating brief language training programs for medical students and residents have demonstrated less use of professional interpreters and more communication errors after the course.<sup>41,43</sup> The degree of language proficiency required by a clinician to provide safe and effective care in that language has not yet been determined, and thus, no standards exist to guide clinician behavior after taking language courses.<sup>44</sup> Research has shown, however, that care provided by non-fluent physicians can be as problematic as care provided by clinicians using ad-hoc interpreters to bridge the language barrier.<sup>16,18</sup> Therefore, while these language courses may improve rapport between clinicians and patients with LEP, course participants must be taught that their language skills should not replace working with professional interpreters during clinical encounters.<sup>43</sup>

Testing and certification of language proficiency for clinicians is likely to be informed by the process of national certification for professional interpreters, which has been evolving over the past several years.<sup>45</sup> There is a need to establish standards for clinician non-English language proficiency to ensure the quality of communication with LEP patients. The lack of consistency in reporting fluency currently impedes the development of strategies aimed at eliminating health-care disparities, which could include matching LEP patients with truly bilingual clinicians or improving access to and use of professional interpreters. While some health-care organizations have instituted language proficiency testing for bilingual staff,<sup>46</sup> few have broached the topic of testing for physicians and nurses.<sup>47,48</sup> Our results, however, highlight the potential benefit of characterizing clinician language proficiency on a standard scale, such as the Interagency Language Roundtable (ILR). The ILR has been used extensively in non-medical fields and could be adapted for use in health-care settings.<sup>49</sup> Health-care organizations could then limit clinicians providing language-concordant care to those who self-identify as having high non-English language proficiency. Alternatively, health-care organizations could consider testing clinicians who wish to use their language skills with patients, regardless of their self-reported proficiency level. There are several different commercially available oral proficiency interviews for language fluency with varying levels of validation, but the most notable is one from the American Council on the Teaching of Foreign Languages. However, most of these tests evaluate interpreting ability rather than direct communication. One available test, the Clinician Cultural and Linguistic Assessment, was developed by clinicians and researchers affiliated with Kaiser Permanente and is the first, and to date, the only tool designed and validated explicitly for use in health-care settings to assess both the linguistic and cultural proficiency of clinicians.<sup>47</sup>

If research can demonstrate a correlation between self-reported language proficiency and formal testing, such assessments of clinicians who self-report either high- or low-level language proficiency may be unnecessary, and policies can be set for these clinicians without further evidence; clinicians with high-level proficiency can be allowed to use of their non-English language skills directly with patients and work with professional interpreters at their discretion, whereas clinicians with low-level

proficiency must document working with professional interpreters with LEP patients. Resources can thus be focused on clinicians who report medium-level proficiency on the ILR or comparable scale. Indeed, clinicians who test close to a hypothetical passing score could be remediated in specific skills that could improve their ability to communicate effectively in that language. For example, clinicians who test at a medium to high level could get specific feedback about the language skills they need (e.g., medical vocabulary, use of the past tense) so that they can improve those skills and be retested prior to routinely using their language skills with patients. Until the relationship between the use of medium proficiency non-English by clinicians and the quality of care provided to LEP patients is better understood, initial policies cannot be set for that group.

Although our study has important implications for policy and professional education, there are some limitations to consider. First, this was a single site study conducted on a general medicine floor. Thus, results may not be generalizable to other units, departments, hospitals, or the outpatient setting (including small practices). However, the strategies to overcome language barriers that clinicians report in our study are likely to be similar in other inpatient settings, given the common clinical scenarios used in our survey. Second, the language assessment tool used in this study was based on self-report of language proficiency by physicians and nurses, which may not correlate to tested ability. However, there are not yet any validated self-reporting scales of non-English language proficiency in existence for clinician-patient interactions. Third, the quality improvement effort from which this analysis began was not aimed at physicians and nurses using their own Spanish skills, but simply at increasing access to professional interpreters. Overall, that project was a success,<sup>32</sup> and this analysis was designed to characterize how Spanish-speaking physicians and nurses bridge the language gap in specific clinical scenarios, not as a result of the intervention. Finally, this study did not account for patient perspectives, and thus cannot evaluate the relationship between strategies to overcome language barriers and quality of care, clinical outcomes, or patient satisfaction. Future studies should focus on these relationships.

In summary, physicians and nurses with limited Spanish proficiency use these skills, even in important clinical circumstances in the acute care setting. Health-care organizations should evaluate clinicians' non-English language proficiency levels and set policies about the use of non-English language skills in clinical care. More research is needed to inform such policies, particularly for medium proficiency clinicians; however, those with low proficiency should work with professional interpreters.

---

**ACKNOWLEDGEMENTS:** The project was funded in part by the UCSF Medical Center Patient Care Fund. Dr. Diamond was supported by the Palo Alto Medical Foundation Research Institute and The California Endowment.

**Conflict of Interest:** None disclosed.

**Corresponding Author:** Lisa C. Diamond, MD, MPH; Memorial Sloan-Kettering Cancer Center, Center for Immigrant Health and Cancer Disparities, Department of Psychiatry and Behavioral Health, 641 Lexington Ave, 7th Floor, New York, NY 10022, USA (e-mail: diamondl@mskcc.org).

## REFERENCES

- Shin HB, Kominski RA. Language Use in the United States: 2007. US Census; 2010 [cited 2011 May 20]; Available from: <http://www.census.gov/hhes/socdemo/language/data/acs/ACS-12.pdf>.
- Anderson LM, Scrimshaw SC, Fullilove MT, Fielding JE, Normand J, Task Force on Community Preventive S, et al. Culturally competent healthcare systems. A systematic review. *Am J Prev Med*. 2003;24(3 Suppl):68–79.
- DuBard C, Gizlice Z. Access to care, and receipt of preventive services among US Hispanics. *Am J Public Health*. 2008;98(11):2021–8.
- Fernandez A, Schillinger D, Warton EM, Adler N, Moffet HH, Schenker Y, et al. Language barriers, physician-patient language concordance, and glycemic control among insured Latinos with diabetes: The Diabetes Study of Northern California (DISTANCE). *J Gen Intern Med*. 2011;26(2):170–6.
- Phelan M, Parkman S. How to work with an interpreter. *BMJ*. 1995;311(7004):555–7.
- Pippins JR, Alegria M, Haas JS, Pippins JR, Alegria M, Haas JS. Association between language proficiency and the quality of primary care among a national sample of insured Latinos. *Med Care*. 2007;45(11):1020–5.
- Woloshin S, Bickell NA, Schwartz LM, Gany F, Welch HG. Language barriers in medicine in the United States. *JAMA*. 1995;273(9):724–8.
- John-Baptiste A, Naglie G, Tomlinson G, Alibhai SMH, Etchells E, Cheung A, et al. The effect of English language proficiency on length of stay and in-hospital mortality. *J Gen Intern Med*. 2004;19(3):221–8.
- Karliner LS, Kim SE, Meltzer DO, Auerbach AD. Influence of language barriers on outcomes of hospital care for general medicine inpatients. *J Hosp Med*. 2010;5(5):276–82.
- Atchison KA, Black EE, Leathers R, Belin TR, Abrego M, Gironde MW, et al. A qualitative report of patient problems and postoperative instructions. *J Oral Maxillofac Surg*. 2005;63(4):449–56.
- Wilson E, Chen AHM, Grumbach K, Wang F, Fernandez A. Effects of limited English proficiency and physician language on health care comprehension. *J Gen Intern Med*. 2005;20(9):800–6.
- Wisnivesky JP, Kattan M, Evans D, Leventhal H, Musumeci-Szabo TJ, McGinn T, et al. Assessing the relationship between language proficiency and asthma morbidity among inner-city asthmatics. *Med Care*. 2009;47(2):243–9.
- Flores G, Laws MB, Mayo SJ, Zuckerman B, Abreu M, Medina L, et al. Errors in medical interpretation and their potential clinical consequences in pediatric encounters. *Pediatrics*. 2003;111(1):6–14.
- Jacobs EA, Lauderdale DS, Meltzer D, Shorey JM, Levinson W, Thisted RA. Impact of interpreter services on delivery of health care to limited-English-proficient patients. *J Gen Intern Med*. 2001;16(7):468–74.
- Karliner LS, Jacobs EA, Chen AH, Mutha S. Do professional interpreters improve clinical care for patients with limited English proficiency? A systematic review of the literature. *Health Serv Res*. 2007;42(2):727–54.
- Baker DW, Parker RM, Williams MV, Coates WC, Pitkin K. Use and effectiveness of interpreters in an emergency department. *JAMA*. 1996;275(10):783–8.
- Burbano O'Leary SC, Federico S, Hampers LC. The truth about language barriers: one residency program's experience. *Pediatrics*. 2003;111(5 Pt 1):e569–73.
- Diamond LC, Schenker Y, Bradley EH, Curry L, Fernandez A. Getting by: underuse of interpreters by resident physicians. *J Gen Intern Med*. 2009;24(2):256–62.
- Schenker Y, Wang F, Selig SJ, Ng R, Fernandez A. The impact of language barriers on documentation of informed consent at a hospital with on-site interpreter services. *J Gen Intern Med*. 2007;22(S2):294–9.
- Yawman D, McIntosh S, Fernandez D, Auinger P, Allan M, Weitzman M. The use of Spanish by medical students and residents at one university hospital. *Acad Med*. 2006;81(5):468–73.
- Karliner LS, Perez-Stable EJ, Gildengorin G. The language divide. The importance of training in the use of interpreters for outpatient practice. *J Gen Intern Med*. 2004;19(2):175–83.
- Lee KC, Winickoff JP, Kim MK, Campbell EG, Betancourt JR, Park ER, et al. Resident physicians' use of professional and nonprofessional interpreters: a national survey. *JAMA*. 2006;296(9):1050–3.
- Green AR, Ngo-Metzger G, Legedza AT, Massagli MP, Phillips RS, Iezzoni LI. Interpreter services, language concordance, and health care quality. Experiences of Asian Americans with limited English proficiency. *J Gen Intern Med*. 2005;20(11):1050–6.
- Ngo-Metzger G, Sorkin D, Phillips R, Greenfield S, Massagli M, Glaridge B, et al. Providing high-quality care for limited English proficient patients: the importance of language concordance and interpreter use. *J Gen Intern Med*. 2007;22(Suppl 2):324–30.
- Manson A. Language concordance as a determinant of patient compliance and emergency room use in patients with asthma. *Med Care*. 1988;26(12):1119–28.
- Perez-Stable EJ, Napoles-Springer A, Miramontes JM. The effects of ethnicity and language on medical outcomes of patients with hypertension or diabetes. *Med Care*. 1997;35(12):1212–9.
- Fernandez A, Schillinger D, Grumbach K, Rosenthal A, Stewart AL, Wang F, et al. Physician language ability and cultural competence. An exploratory study of communication with Spanish-speaking patients. *J Gen Intern Med*. 2004;19(2):167–74.
- Eamranond PP, Davis RB, Phillips RS, Wee CC. Patient-physician language concordance and lifestyle counseling among Spanish-speaking patients. *J Immigr Minor Health*. 2009;11(6):494–8.
- Carter-Pokras O, O'Neill MJ, Cheanvechai V, Menis M, Fan T, Solera A, et al. Providing linguistically appropriate services to persons with limited English proficiency: a needs and resources investigation. *Am J Manag Care*. 2004;10:SP29–36.
- Jacobs E, Sadowski L, Rathouz P. The impact of an enhanced interpreter service intervention on hospital costs and patient satisfaction. *J Gen Intern Med*. 2007;22(Suppl 2):306–11.
- Wirthlin Worldwide. Research Report-Hablaamos Juntos: We Speak Together. 2008 [cited 2011 May 20]; Available from: [http://www.hablaamosjuntos.org/pdf\\_files/wirthlin\\_report.pdf](http://www.hablaamosjuntos.org/pdf_files/wirthlin_report.pdf).
- Tuot DS, Lopez M, Miller C, Karliner LS. The Impact of an Easy Access Telephonic Interpreter Program in the Acute Care Setting: an Evaluation of a Quality Improvement Intervention. *Joint Commission Journal on Quality and Patient Safety*. 2010; In Press.
- Karliner LS, Hwang ES, Nichleach D, Kaplan CP. Language Barriers and Patient-Centered Breast Cancer Care. *Patient Education and Counseling*. 2010 Aug 2; ePub ahead of print.
- National Council on Interpreting in Health Care. The Terminology of Health Care Interpreting: A Glossary of Terms. 2001 [cited 2011 May 20]. Available from: <http://www.linguisticinternational.com/files/TheTerminologyofHealthCareInterpreting.pdf>.
- U.S. Department of Justice, Civil Rights Division. Title VI of the Civil Rights Act. 1964 [cited 2011 May 20]. Available from: [www.justice.gov/crt/grants\\_statutes/titlevi.txt](http://www.justice.gov/crt/grants_statutes/titlevi.txt).
- Chen AH, Youdelman MK, Brooks J. The legal framework for language access in healthcare settings: Title VI and beyond. *J Gen Intern Med*. 2007;22(Suppl 2):362–7.
- US Department of Health and Human Services, Office of Minority Health. National Standards for Culturally and Linguistically Appropriate Services in Health Care. US Department of Health and Human Services-Office of Minority Health; 2001 [updated 2001; cited 2011 May 20]; Available from: <http://www.omhrc.gov/assets/pdf/checked/executive.pdf>.
- Schenker Y, Lo B, Ettinger K, Fernandez A. Navigating language barriers under difficult circumstances. *Ann Intern Med*. 2008;149(4):264–9.
- Mazor S, Hampers L, Chande V, Krug S. Teaching Spanish to pediatric emergency physicians: effects on patient satisfaction. *Arch Pediatr Adolesc Med*. 2002;156(7):693–5.
- Nora L, Daugherty S, Mattis-Peterson A, Stevenson L, Goodman LJ. Improving crosscultural skills of medical students through medical school-community partnerships. *West J Med*. 1994;161:144–7.
- Prince D, Nelson M. Teaching Spanish to emergency medicine residents. *Acad Emerg Med*. 1995;2(1):32–6.
- Reuland D, Frasier P, Olson M, Slatt L, Aleman M, Fernandez A. Accuracy of self-assessed Spanish fluency in medical students. *Teach Learn Med*. 2009;21(4):305–9.
- Diamond LC, Jacobs EA. Let's not contribute to disparities: the best methods for teaching clinicians how to overcome language barriers to health care. *J Gen Intern Med*. 2010;25(Suppl 2):189–93.
- Diamond LC, Reuland DS. Describing physician language fluency: deconstructing medical Spanish. *JAMA*. 2009;301(4):426–8.
- Certification Commission for Healthcare Interpreters. 2011 [cited 2011 May 20]; Available from: <http://www.healthcareinterpretercertification.org/index.html>.

- 
46. **Moreno M, Otero-Sabogal R, Newman J.** Assessing dual-role staff-interpreter linguistic competency in an integrated healthcare system. *J Gen Intern Med.* 2007;22(Suppl 2):331-5.
  47. **Tang G, Lanza O, Rodriguez FM, Chang A.** The Kaiser Permanente Clinician Cultural and Linguistic Assessment Initiative: research and development in patient-provider language concordance. *Am J Public Health.* 2011;101:205-208.
  48. **Tidwell L.** Kaiser Permanente-Southern California Physicians Language Concordance Program: Meeting the Needs of LEP Patients. Health Care Interpreter Network. Oakland, CA: From Ad-Hoc to Best Practices in Healthcare Interpreting; 2009. July 16-17.
  49. Interagency Language Roundtable. Interagency Language Roundtable. 2009 [updated 2009; cited 2011 May 20]; Available from: <http://www.govtirl.org>.